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## Table of Contents

SUMMARY .....	3
DISCUSSION .....	4
Background on Acision and One2many and Its Interest in this Proceeding.....	4
Responses to Specific Questions .....	5
Paragraph 8; available transport technologies .....	5
Paragraph 9; Point-to-multipoint technologies .....	5
Paragraph 16; content issues.....	6
Paragraph 21 and 22; geo-targeting .....	6
Paragraph 24; transmission in languages other than English.....	7

## **SUMMARY**

This comment addresses the issues raised by the Commission in the NPRM pertaining to cell broadcast.

The Dutch Ministry of Internal Affairs has conducted tests with a public warning service using cell broadcast, involving thousands of citizens. The Ministry intends to deploy a regular warning service later in 2008.

During the tests similar issues were raised as are now being raised by the Commission. This comment addresses these issues in more detail in the remainder of this document.

The main conclusion from the tests in the Netherlands is that cell broadcast is a viable technology for a public warning service. However, there are issues where improvement is required to make the service truly useful. These issues are not fundamental issues, but mostly software issues and therefore business issues.

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of

## The Commercial Mobile Alert System

EB Docket No. 07-287

## COMMENTS OF ACISION B.V. AND ONE2MANY B.V.

Acision and One2many hereby submit these comments in response to the Notice of Proposed Rulemaking (“NPRM”) in the above-captioned proceeding in support of the Commercial Mobile Alert System. One2many develops, deploys and supports Cell Broadcast systems exclusively for and on behalf of Acision (formerly LogicaCMG Telecom) to the wireless industry throughout the world. One2many appreciates this opportunity to provide these comments to the Federal Communications Commission (“Commission”) on the matter of the Commercial Mobile Alert System.

## DISCUSSION

### ***Background on Acision and One2many and Its Interest in this Proceeding***

Acision's North American region is headquartered in Lexington, MA and has offices in Bellevue, WA, Dallas, TX, Richmond, VA, and Atlanta, GA. The company also has offices in 33 other countries around the world. Acision systems:

- Process more than 2 out of every 3 mobile text messages sent in the world;
- Were the first to develop mobile commercial text messages, mobile text messaging for 3G networks, and commercial deployment of mobile multi-media messages;
- Delivered the first secure e-commerce transactions over a mobile phone;
- Delivered the first commercial cell broadcast system
- Provide solutions which serve over 500 million active mobile phone subscribers worldwide;

- Support some 250 operators in more than 70 countries, including half of the world's digital mobile operators.

*Acision is the world leader in short message service ("SMS"), cell broadcast ("CB") as well as one of the top three suppliers of multimedia messaging systems ("MMS").*

Acision has outsourced its development, deployment and support of the cell broadcast system to One2many and remains the exclusive sales channel for this product.

## ***Responses to Specific Questions***

### **Paragraph 8; available transport technologies**

The Commission seeks comment on the viability of point-to-point technologies. On January 4, 2008, Mrs. Deepti Hajela of the Associated Press, published an article on Yahoo Finance, called "**Congestion Causes Text Message Slowdown**"<sup>1</sup>. Mrs. Hajela discusses the network congestion occurring on New Year's Eve, where text messages got bounced or were delivered more than 24 hours after they were sent. Similar congestions were reported on 9/11 and the 7/7 bombing in London. These occurrences do show that network congestion does happen and make any point-to-point technology unviable.

### **Paragraph 9; Point-to-multipoint technologies**

The Commission asks if point-to-multipoint technologies such as cell broadcast provide a viable transport solution for alerts transmitted over the CMAS. The CMSAAC report in Appendix B of the NPRM doesn't state why cell broadcast is not a suitable technology; only battery consumption is mentioned as a problem more than once.

In June 2007, the Department of Science and Technology at the University of Linköping, Sweden, published a bachelor's thesis by Karin Axelsson and Cynthia Novak on the subject of "Cell Broadcast as a Global Warning System". In this thesis the theoretical extra power consumption in a mobile phone was calculated to be a maximum of 5.4%.

The discussion about battery consumption due to cell broadcast started many years ago when there was no 3G, no Bluetooth, no color displays, no MP3 and low capacity NiCd batteries. In my view the battery was an issue once, but is no longer. Regrettably, the CMSAAC report doesn't state on which grounds the conclusion was drawn that battery consumption is still an issue.

During the last two years the Dutch Ministry of Internal Affairs (Dutch State Department) has conducted various tests with cell broadcast as a public warning system, involving thousands of Dutch citizens. The Ministry has concluded that cell broadcast is a viable technology for public

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<sup>1</sup> ([http://biz.yahoo.com/ap/080104/text\\_messaging\\_networks.html](http://biz.yahoo.com/ap/080104/text_messaging_networks.html))

warning purposes and it is planned that a country-wide service will be deployed later in 2008. However, the tests did show that improvements would be needed:

- cell broadcast should be available in both GSM and UMTS (WCDMA). At this moment most networks do offer the cell broadcast capability in both GSM and UMTS, but UMTS support is still missing on the phones.
- the cell broadcast feature should be activated and configured upon purchase. The Dutch carriers have stated that this would be possible to do.
- the alert message should be associated with a specific alert signal, which cannot be assigned to any other service (to prevent misuse)

The Ministry has involved major terminal manufacturers to discuss the terminal related issues. These issues are not technical issues, but business issues.

Assigning an audible alert signal to an alert message only could be solved on the terminal, but may require modifications on the network side, and hence the 3GPP cell broadcast standard.

It would be advantageous if roaming were possible. When an American citizen travels for instance to the UK and assuming that the UK also offers an alert service over cell broadcast, then it would be good if no settings had to be changed on the phone. The ITU has deployed an initiative to standardize the use of channels for public warning. This is still ongoing.

The Dutch government has taken the approach that the service should be a service for 15 years at least, so it is not required that the service works perfectly on day one. For instance the requirement that cell broadcast shall be available on UMTS has a clause that this should be effective in two years time. The Dutch government also counts on the "buddy effect", meaning that it is not necessary that 100% of the affected citizens receive the alert message. When a sufficient number of people are reached, others will know soon enough.

The Dutch government also realizes that there is a legacy base of terminals in use that do not support CMAS fully. Since the service is envisioned to be a long term service, this will improve over time.

## **Paragraph 16; content issues**

The Commission seeks comment on the need for various alert classes, such as the Presidential message, imminent threats alert and Amber alerts. One good reason for considering various classes is that if an alert is only received once per year or even less, the citizen may forget about the very existence of the CMAS and may not respond as desired when the odd alert message is received. Broadcasting Amber messages could be a means to keep the awareness high.

## **Paragraph 21 and 22; geo-targeting**

The Commission seeks comment on the recommendation, including the assertion that technical limitations currently preclude dynamic geo-targeting at a level more granular than the county.

Cell broadcast standards allow geo-targeting to the individual cell level. In rural areas one single cell may cover a distance of 20 miles. However, in metropolitan areas there are a lot more cells *installed for capacity reasons. These cells may cover a distance of no more than 100 yards.* Coverage of cells don't stop at borders; coverage is not bound by jurisdictions.

If a cell broadcast center can do geo-targeting at cell (base station) level or at base station controller level<sup>2</sup> depends on the implementation of the vendor.

### **Paragraph 24; transmission in languages other than English**

The Commission seeks comment on the technical feasibility of providing commercial mobile alerts in languages in addition to English. The CMSAAC suggested that there may be fundamental technical challenges. Regrettably the CMSAAC report doesn't state what these fundamental problems are.

Cell broadcast doesn't have these fundamental problems. A message parameter of the cell broadcast message is the Message Identifier, often called channel. There are 65000 channels and the first 999 can be activated from the menu on the phone. If for instance channel 920 would be assigned for the English alert message and channel 921 for the Spanish alert message, then English speaking citizens would activate channel 920 on their phone and Spanish speaking people would activate channel 921. If an alert would have to be broadcast, the English message will be broadcast on channel 920 and the Spanish message on channel 921. Those citizens that have only channel 920 activated will only receive the English message and those that have activated channel 921 will only receive the Spanish message. This is a basic cell broadcast feature.

This way, messages of 93 characters per page can be broadcast. If messages in the UCS-2 character set must be broadcast (such as Chinese or Arab characters) then only 41 characters per page are available.

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<sup>2</sup> One Base Station Controller controls between 150 and 400 cells